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Dimorpho-dichogamy in Juglans cinerea, L.—All the trees of this species which have come under my observation range themselves clearly into two distinct sets as respects the relative development of their sexual organs. In one set the stamens mature some ten days in advance of the pistils on the same trees. In the other set, however, they are at this time just ready to receive pollen, while the stamens which accompany them only develop and shed their pollen in time to fertilize the pistils of the set first mentioned. This simply is the monœcism of the species carried one step further, and self-fertilization becomes scarcely possible.

As respects the bearings of this arrangement on the fertility of the plant it is obvious that isolated trees, or those otherwise unfavorably located with respect to their fellows, must be liable to sterility; and, likewise, that weather favorable or unfavorable to the transmission of pollen by the wind, or to the operations of insects among the flowers, prevailing earlier or later, when either corresponding set of sexual organs is at full development, must for that year influence the fertility of one half the trees.

It is desirable that some one favorably located will observe the behavior of the other species in this regard. Our species of *Carya*, also, need attention, for I have seen in this genus at least a disposition to assume the same arrangement.—C. G. Pringle.

Leaf-propagation of Nasturtium lacustre, Gr.—Early in July this plant, then coming into flower, begins to cast its leaves, commencing with the lowest and most dissected and progressing upward along the stem even to the small entire ones on the branches. They fall not in the least withered or faded with age, but while still green and gorged with elaborated material for growth, as soon, in short, as they have attained their fullest development. Alighted on the sur face of the soft mud or ooze, which is the habitat of this species, each leaf puts forth from a minute bud at its extreme base a young plant which develops stem and leaves simultaneously with roots, absorbing and appropriating the nutriment stored in the leaf, whose frame in a short time decays, while the plantlet goes on in an inde-

pendent existence. The plants propagated by the leaves have one year's start of those resulting from the seeds of the same year; but upon the latter, borne away by the fall and springs floods, the plant must chiefly depend for its dispersion.—C. G. PRINGLE.

THE AUTUMNAL FLORA OF FORTRESS MONROE.—Stretching north two or three miles from the Fort, is a sandy region from a quarter to half a mile in width, washed on the east by the waters of the Chesapeake Bay, and on the west by a shallow arm of the same. The sand on the seaward side has been drifted into a succession of low hills or dunes perhaps twenty-five feet high. These are covered with thickets and have proved to be very attractive hunting-grounds to the botanists.

On the 20th of Sept. the writer, in company with Dr. Vasey, spent the day in supplementing previous collections made in the same vicinity in the spring.

Starting from the wharf we found growing in the pure sand *Diodia teres*, with a vigor, closeness of growth and profusion of crystalline bristles, quite unlike the usual forms. Closely associated we found *Salsola Kali*, *Œnothera humifusa*, *Cynodon Dactylon*, *Euphorbia polygonifolia*, and that vile pest, *Cenchrus tribuloides*. Crossing the parade ground of the Fortress with its noble groves of *Quercus virens*, and its tropical looking gardens with Yuccas, Figs, Lagerstrœmias and other unfamiliar shrubs, we descend the ramparts and come to a salt marsh. Here we find *Borrichia pubescens*, (a few late flowers), *Iva frutescens* and *imbricata* (not in Gray's Manual), *Salicornia herbacea*, *Virginica*, and *fruticosa*, var. *ambigua*, *Suæda maritima*, *Baccharis halimifolia*, *Bryzopyrum spicatum*, *Statice Limonium*, and *Rhynchospora inexpansa*.

In drier localities *Solidago sempervirens*, and (strange to say) *Riddellii*!!, *Aristida purpurascens*, *Tricuspis purpurea*, *Cakile Americana*, *Vilfa Virginica*, and spreading sometimes 10 feet over the sand, *Phaseolus diversifolius*. *Opuntia vulgaris* covers acres. Coming to the first of the sand hills, we find it covered with dense thickets of *Quercus virens* and *cinerea*, finely in fruit (its farthest northern limit). *Myrica cerifera*, *Prunus maritima*, *Zanthoxylum Carolinianum*, *Bumelia lycioides*, and these shrubs over-run with *Smilax glauca* and *tamnoides*, all these in fruit. *Vitis vulpina* is abundant and were it a fortnight later, its clusters would be inviting. Among these hills we find also *Panicum amarum*, *Uniola paniculata*, *Monarda punctata*, and *Andropogon argenteus*. Passing to the landward side of the hills we find groves of *Pinus Tæda*, intermingled with *Ilex opaca*. One old

Holly, much damaged by high winds, measured, at 4 feet from the ground, 69 inches in circumference. *Centrosæma Virginiana* is very abundant and conspicuous with its long and slender pods. *Eupatorium hyssopifolium* and *fœniculaceum*, *Desmodium strictum*, *Helianthemum corymbosum*, *Callicarpa Americana*, with its showy axillary clusters of purple fruit, *Lespedeza Stuvei*, *Galium hispidulum*, *Elephantopus nudatus*, *Eragrostis tenuis*, *Cyperus Grayii*, and *ovularis*, with *Paspalum ovatum*, Sim.!!! a South American species, are among the plants collected through the woods.

Previous explorations have detected *Allium striatum*, *Pyrus angustifolia*, *Juncus Rœmerianus*, *Jatropha stimulosa*, *Danthonia sericea*, *Muscari botryrides*, and *Senebiera didyma*.

In the vicinity of Hampton are found *Lolium temulentum*, *Cirsium horridulum*, *Senecio tomentosus*, *Gratiola sphærocarpa*, *Ranunculus parviflorus*, *pusillus* and *hederaceus*! *Fedia olitoria*, *Amaryllis Atamasco*, *Hydrocotyle umbellata*, *Sagina subulata*, *Briza media*, *Oxydrendon arboreum* and *Rumex pulcher*.

Of most of these, the writer has specimens for exchange.—J. W. CHICKERING, JR., *Deaf-Mute College*, *Washington, D. C.*

P. S. On a trip to Luray Cave in June, *Bupleurum rotundifolium* was found in abundance where Dr. Gray detected it 38 years before.

THE GEOGRAPHICAL RANGE OF PETALOSTEMON FOLIOSUS, GRAY, IN ILLINOIS.—The note of Mr. Boltwood, in the GAZETTE for October, announcing the discovery of this rather rare plant at Ottawa, raises some questions as to localities where it may yet be looked for. As I found it in 1872 on an island in the Kankakee river, at Altorf, Ill., about eight miles below Kankakee, and as it had been found before by Mr. Burgess Truesdell on the Fox river, in Kane Co., this third locality at Ottawa makes a good connecting link to indicate its probable range. A glance at the map will give us some clue to this. The Fox is a branch of the Illinois, joining it at Ottawa The Kankakee enters the Illinois a few miles above Morris. The valleys of the two streams, together with the upper Illinois, and perhaps lower down, may yet show other stations for the plant. Though I was often during several years along the banks of the Kankakee from Rock creek, below Altorf, to Momence, near the Indiana line, I saw no further indications of the plant, though from some remains, found late one season, it might be looked for lower down the stream. Two years after finding it, I searched long and carefully in the first locality for more, but in vain, though the ground was such that they could scarcely have been concealed. On getting some roots for Dr. Gray, to